

High Reliability 1.0-inch 7-Segment Numeric LED Displays

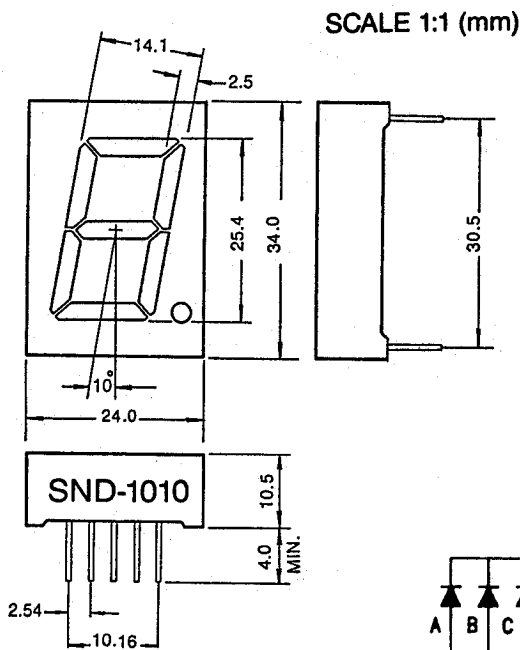
SND-1010 SND-1017

GENERAL DESCRIPTION

The SND-1010 and the SND-1017 series are high performance epoxy resin molded 7 segment numeric LED displays of which character height is 1.0 inch (25.4mm) and there is a choice of three emitting colors; red, orange and yellow-green. These series provide two configurations; single chip per segment for an economical grade and two chips in series per segment for a standard unit.

The standard units are constructed with black face and milky white segment color.

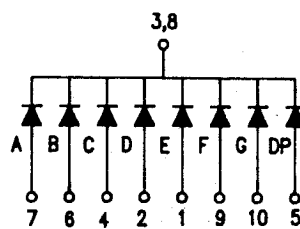
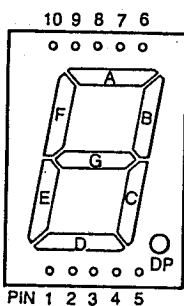
PACKAGE DIMENSIONS



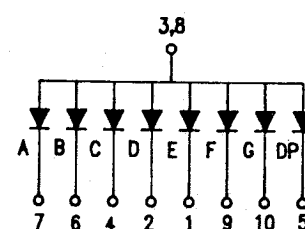
FEATURES

1. High brightness with high contrast
2. Uniform brightness and wide angle viewing
3. Low power consumption
4. Solid state stability and long operation life
5. Cathode-common (SND-1010) and anode-common (SND-1017) types available

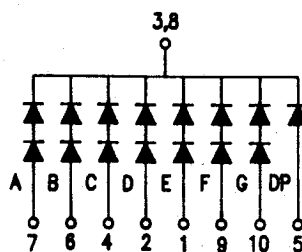
PIN ARRANGEMENT (Top View)



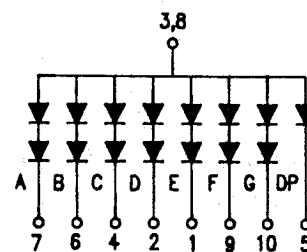
SND-1010 (Cathode Common)



SND-1017 (Anode Common)



SND-1010-2 (Cathode Common)



SND-1017-2 (Anode Common)

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Red SND 1010/1017UR (GaAlAs)

Absolute Maximum Ratings (T_a = 25°C)

Power dissipation/Total	320	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	-25 ~ +85	°C
Storage temperature	-55 ~ +100	°C

Electrical/Optical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V _F	I _F = 10mA	—	1.9	2.1	V
Reverse current/Seg	I _R	V _R = 4V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	1000	2000	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	660	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	20	—	nm

Orange SND 1010/1017SR (GaAsP/GaP)

Absolute Maximum Ratings (T_a = 25°C)

Power dissipation/Total	320	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	-25 ~ +85	°C
Storage temperature	-55 ~ +100	°C

Electrical/Optical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V _F	I _F = 10mA	—	2.0	2.2	V
Reverse current/Seg	I _R	V _R = 4V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	500	1000	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	635	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	35	—	nm

Orange SND 1010SR2/1017SR2 (GaAsP/GaP)

Absolute Maximum Ratings (T_a = 25°C)

Power dissipation/Total	600	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	V
Operating temperature	-25 ~ +85	°C
Storage temperature	-55 ~ +100	°C

Electrical/Optical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V _F	I _F = 10mA	—	4.0	4.4	V
Reverse current/Seg	I _R	V _R = 10V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	800	1500	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	635	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	35	—	nm

Yellow-green SND 1010UG2/1017UG2 (GaP)

Absolute Maximum Ratings (T_a = 25°C)

Power dissipation/Total	600	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	V
Operating temperature	-25 ~ +85	°C
Storage temperature	-55 ~ +100	°C

Electrical/Optical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V _F	I _F = 10mA	—	4.2	4.6	V
Reverse current/Seg	I _R	V _R = 10V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	700	1500	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	565	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	30	—	nm

* Pulse Width 1 ms
Duty Cycle 1/5